

CONCRETE

DECEMBER, 1960



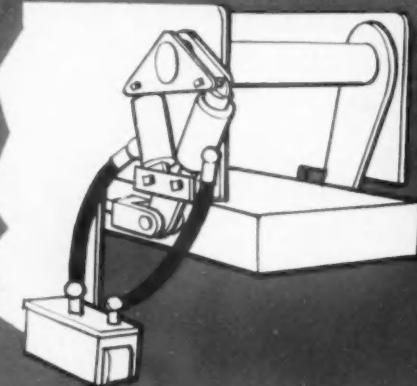
High stacking increases storage at
Blocklite . . . Reinforcing wire used
for heating . . . NRMCA safety winners

EDITORIAL DEPT
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1

HERE'S WHY MAINTENANCE COSTS ARE LESS WITH HYDRAULICS!

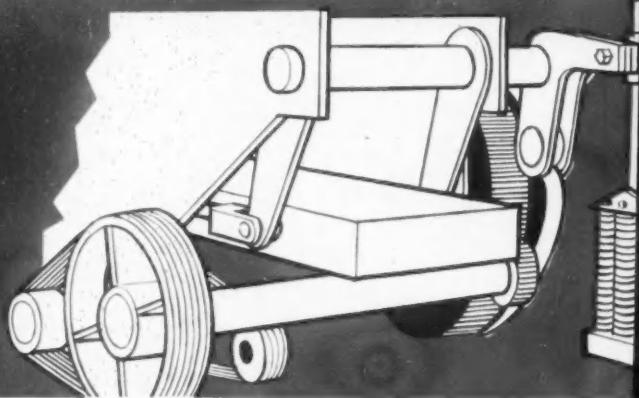
BASICALLY, SIMPLICITY AND HEAVY CONSTRUCTION MAKE THE DIFFERENCE. FOR INSTANCE, LET'S COMPARE JUST THE SIMPLE HYDRAULIC SYSTEM USED TO OPERATE THE FEED DRAWER ON A MODERN GOCORP "TRUSTEE" WITH THE COMPLEX POWER TRAIN REQUIRED TO DO THE SAME JOB ON A CAM MACHINE.



MODERN HYDRAULIC "TRUSTEE" FEED DRAWER

Parts Required

- 1 Hydraulic manifold (which also serves numerous other operations.)
- 2 Hydraulic hoses
- 2 Single Action, Hydraulic Cylinders, each of which includes:
 - 1 Ram
 - 2 Sets of packing
 - 2 "O" Ring Seals
- 2 Brackets
- 4 Cylinder Pins



CAM OPERATED FEED DRAWER

Parts Required

1 Motor Sheave	1 Gigantic Bull Gear and Cam
4 Large "V" Belts	1 Bull Gear Shaft
1 Counter Shaft Driven Sheave	2 Bull Gear Shaft Bearings
1 Counter Shaft	1 Cam Follower
2 Counter Shaft Bearings	1 Cam Follower Roller
1 Counter Shaft Drive Sheave	2 Cam Follower Bearings
6 Extra Large "V" Belts	1 Spring Shaft and Bracket
1 Large Cross Shaft Sheave	4 Yards of large diameter tension springs
1 Large Cross Shaft	1 Spring Anchor Bracket
2 Cross Shaft Bearings	
1 Cross Shaft Pinion Gear	

Plus dozens of feet of lubricating tubing, dozens of lubrication fittings, nuts, bolts, keys, set screws, brackets and what have you.

AND REMEMBER, this is just one example of the maintenance savings that result from the use of hydraulics throughout GOCORP "TRUSTEES."

Be honest with yourself, now. Parts subject to wear, do wear out and have to be replaced. The parts cost enough but you also have the extra down time and the non-productive repair time of at least two men.

Sure, you have things go wrong with GOCORP "TRUSTEES," too, but you don't have to pull a

bunch of shafts; do a lot of refitting and refitting; or back breaking juggling. Cylinders can be changed in a few minutes, hoses in the blink of an eye—and you get smoother, faster action to boot.

Modern, heavy machinery in practically every field has switched to hydraulics for power transmission. (Automobiles, road building equipment, cranes, machine tools—to name a few).

Times are changing, HOW ABOUT YOU?

SEE RACKMAN IN ACTION
ASK TO SEE GOCORP'S MOVIE, "1,000 PROFITS AN HOUR"

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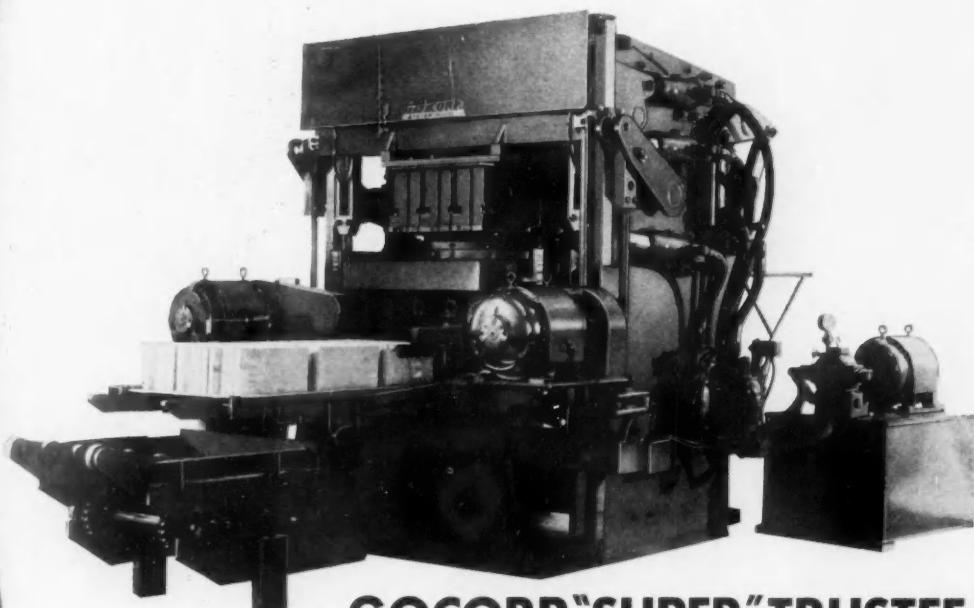
- * "Special" TRUSTEE—with many features of the "Super"
- * 2X and 2½X TRUSTEE Thrifty Models
- * RACKMAN Automatic Loaders and Unloaders—Synchronized or detached
- * Mixers, Skips, Cubers, Offbearers and other allied equipment

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Keep

YEARS AHEAD TOMORROW

WITH
ANY



GOCORP "SUPER" TRUSTEE

Hydraulic **GOCORP "TRUSTEE"**

PROVEN IN THE FIELD — THE BIG, HEAVY DUTY, 3 at a time, PLAIN PALLET, "SUPER" TRUSTEE IS READY TO GO TO WORK FOR YOU NOW!

CONSIDER THESE FACTS!!!

- **HIGHER PRODUCTION**—Up to 1100 good blocks per hour, with many aggregates, without abusing the machine.
- **TOP QUALITY BLOCKS**—Fewer culs in production • Fewer rejects on the job • Variable cycle—for complete flexibility and constant control of quality • Accurate height control.
- **LOWER MAINTENANCE**—Hydraulic operation means fewer wearing parts • Smoother operation • The elimination of cams, cam followers and gears means big maintenance savings for you.

- **QUICK MOLD CHANGE**—Change full height molds in about 20 minutes—to other heights in about 30.

- **RUGGED CONSTRUCTION**—Heavy duty frame with heavy plate cross bracing • Heavy duty bearings • 5" dia. cross shafts • The "Trustee" is built to last.

- **NO BRAKE FAILURE**—"Trustee" vibrator motors are 10 HP plug reversing type • Designed for frequent stops and starts • No brakes to cause trouble.

Both the "SUPER" TRUSTEE and the new economy model, TRUSTEE "SPECIAL" (also a 3 at a time), will accommodate, without alteration, molds of the majority of plain pallet machines now in use. You can have all the advantages of the modern hydraulic TRUSTEES and protect your mold investment too!

AND THAT'S NOT ALL - Ask about these other fast selling hydraulic TRUSTEE models:

TRUSTEE "SPECIAL" 3 at a time economy model

TRUSTEE 2½X up to two 10 x 8 x 16" units per cycle and other combinations

TRUSTEE 2X up to two 8 x 8 x 16" units per cycle and other combinations

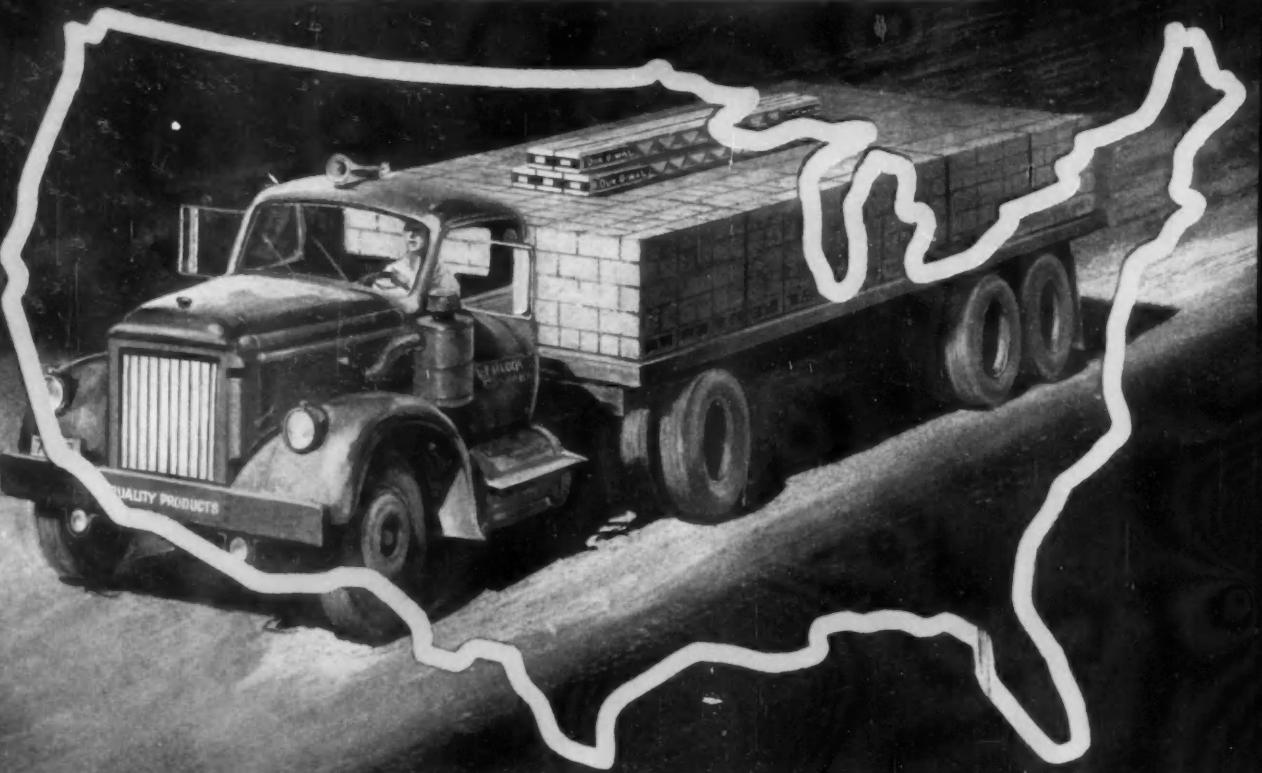
IT COSTS LESS TO OWN A GOCORP

.... BECAUSE VALUE IS A GOCORP PRODUCT

GOCORP
ADRIAN-MICH.

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AMERICA'S MOST WIDELY USED, WIDELY DISTRIBUTED MASONRY WALL REINFORCEMENT



Wherever you sell block you should sell Dur-o-wal

Fancy claims aside, this is the significant fact about Dur-o-wal: It is more widely wanted than any other type of masonry wall reinforcement. It's the national best-seller.

Wherever masonry walls are built, wherever a dealer does business selling masonry, there is more business to be had, with a stock of Dur-o-wal—backed for service by eight strategically located Dur-o-wal factories.

All this, of course, because—with its trussed design, butt-welded construction, scientifically deformed rods—Dur-o-wal masonry wall reinforcement obviously does the job. Standard Weight Dur-o-wal used every second course adds 71 per cent flexural strength to a masonry wall. Get test facts from any of the Dur-o-wal locations below. Tell your customers to see us in Sweet's Catalog.

DUR-O-WAL®

Masonry Wall Reinforcement and Rapid Control Joints

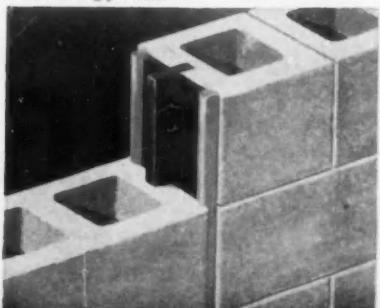
RIGID BACKBONE OF STEEL FOR EVERY MASONRY WALL

DUR-O-WAL MANUFACTURING PLANTS

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- Dur-o-wal Prod., Inc., Box 628, SYRACUSE, N. Y.
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- Dur-o-wal Prod., Inc., 4500 E. Lombard St., BALTIMORE, MD.
- Dur-o-wal of Ill., 119 N. River St., AURORA, ILL.
- Dur-o-wal Prod. of Ala., Inc., Box 5446, BIRMINGHAM, ALA.
- Dur-o-wal of Colorado, 29th and Court St., PUEBLO, COLO.
- Dur-o-wal Inc., 165 Utah Street, TOLEDO, OHIO



Two engineered products that meet a need. Dur-o-wal reinforcement, shown above, and Rapid Control Joint, below. Weatherproof neoprene flanges on the latter flex with the joint, simplify the caulking problem.



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CONCRETE

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DONALD T. PAPINEAU

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Cover:

The Palm Springs (Calif.) Spa made wide use of concrete: in the precast shell entrance arcade, the masonry wall shown at the right, in single T units used in the roof of the main building, and masonry again in the walls. The metal statue, by the way, is a Greek water nymph. Architects: William F. Cody and Wexler & Harrison; statue by Bernard Zimmerman; photo from PCA.

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Wishing you a very Merry Christmas
and the best of everything
for the New Year



See you at the
NCMA
CONVENTION
in Detroit
Jan. 30 - Feb. 2
Please visit us at the
Detroit-Lelar.³
Silver Room



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News

Indiana CMA Meets Jan. 8-10, Indianapolis

The board of directors of the Indiana Concrete Masonry Assoc. have announced the annual convention will be January 8-10 at the Maro't Hotel, Indianapolis.

Cook & Brown Install Punch Card Batching

A new punch card batching system has been installed at the Cook & Brown Lime Co. ready mix plant at Oshkosh, Wis.

The operation, with Rex and Chain Belt equipment, is similar to one recently opened by Consumer Concrete in Chesterton, Ind. After insertion of the proper card, the batching is automatic.

Equipment includes a 175 ton aggregate bin, 850 bbl. cement bin, 30" belt conveyor and, of course, the automated punch-card system.

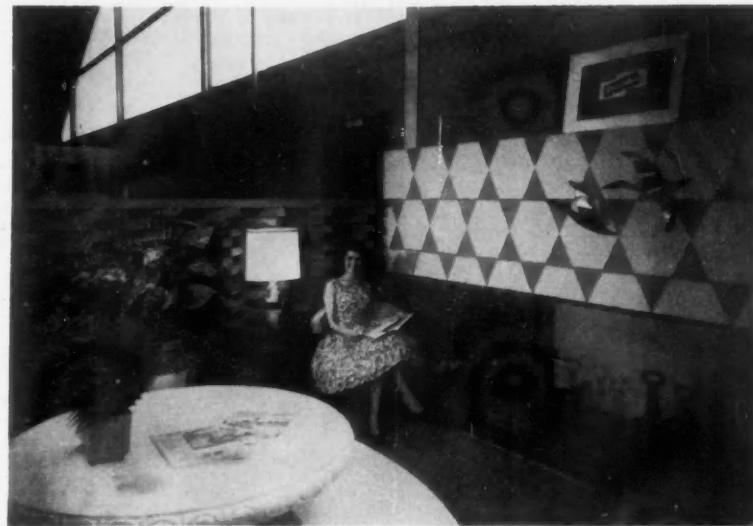
Kaiser Buys N. Hollywood Tile

Kaiser Steel Corp. is reported to have bought the business assets of the North Hollywood Concrete Tile Co. The announcement was made jointly by Jack L. Ashby, Kaiser Steel president, and Ray Clanton of NHCT.

The company, one of the largest in southern California, will be known as the North Hollywood Block Div. of Kaiser Steel.

Mel H. Howard, by-products sales manager for Kaiser, was to take over as general manager. Clanton, who founded the company with his father and brother, will remain as assistant to the general manager.

No mention was made of any effect this would have on the Clanton Corp., block machinery manufacturers, also founded by the Clantons.



Booth Shows Jax-Lite's Versatility

Using Shadowal patio, open core and split units to form a living room and patio display, the Jackson Ready Mix Concrete booth attracted considerable attention at the Annual Home Show in Jackson, Miss. It received enough favorable attention, in fact, to take first place among 80 booths judged.

Two Omaha RM Plants Open

Two new ready mix plants have recently been opened in Omaha, Nebr. One is Counts Concrete Co., headed by Jim Counts, which will handle ready mixed concrete, sand and gravel. The Counts firm uses automated equipment to supply nine trucks.

Missouri Valley Concrete Inc., has opened a plant and office with Jack Casperson as president.

Kuhlman Leases More Land, Equipment

Knapp Ready Mix, Inc., of Monroe, Mich., has leased land and some equipment to Kuhlman Builders Supply & Brick Co., Toledo.

Walter H. Knapp, founder and owner of the Knapp firm, said that the addition of new equipment has doubled plant capacity. Another Kuhlman property, Ball Concrete

Service, has been consolidated with the Knapp plant.

The firm will be known now as Kuhlman Concrete, with 15 employees. Knapp will continue to be associated with the company.

PCA Sets Up Hawaiian District

PCA has announced the election of Hawaiian Cement Corp. as a member of the association, and the opening of a Hawaii district to serve cement users in the newest state.

Joe V. Williams, with PCA since 1956, will be the district engineer with an office in Honolulu.

New RM Plant in Amite, La.

Amite Transit Concrete Co. is the name of a new Amite, La., firm, founded recently by Harmon Schilling and J. Robert Fortenberry.



The growing years *...just ahead for Block*

Come join the 5,000 other block producers and ready-mixers who are going to Detroit this double-barreled convention year. Learn new promotion techniques. Get up-to-the-minute knowledge of C/M research. See the new machinery, new products, new methods that will help you meet the challenge of the sixties. It's all in big, beautiful new Cobo Hall. And be sure to bring the ladies. See you in Detroit!

For hotel reservations write:
Housing Bureau, N.C.M.A.—Detroit Convention & Tourist Bureau
626 Book Building, Detroit 26, Michigan



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**41ST ANNUAL NATIONAL
CONCRETE MASONRY
ASSOCIATION CONVENTION**

**12TH BIENNIAL
CONCRETE INDUSTRIES
EXPOSITION**

Cobo Hall, Detroit

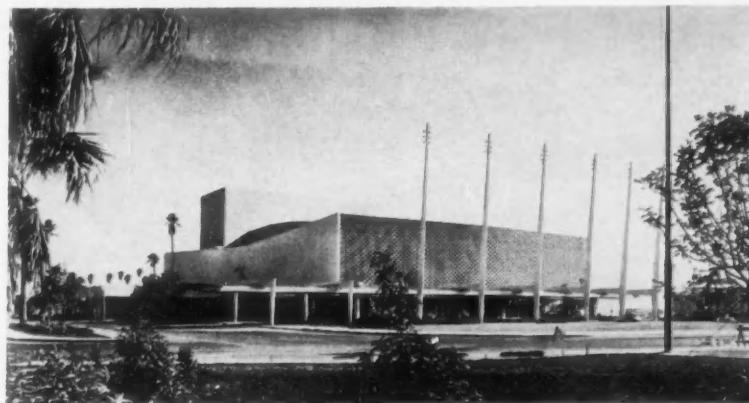
JAN. 30—FEB. 2, 1961

News

Midwest Short Course Program Announced

Purdue University has announced topics for the short course to be conducted there, in cooperation with the Midwest Ready Mixed Concrete Assoc., December 5-6.

Talks include these: Specifications for concrete; typical field problems and suggested solutions; lightweight concrete; water reducers and set retarders; operation problems; safety; how clean equipment sells concrete.



Precast Pylons In Award Winner

A regional AIA award was given to this Santa Monica civic auditorium for "outstanding design and plan". The building features precast pylons and precast grillework on the front. The six pylons are each 72' high.

Planning, design and engineering was by Welton Becket & Assoc.

NCMA Magazine Wins Direct Mail Award

Concrete Masonry Pictorial, published by the National Concrete Masonry Association, Washington, D. C., has received a major advertising award.

The magazine, which promotes new architectural uses of concrete block locally under the auspices of many of the 700 members of NCMA, was judged a winner in the external house publication group of the annual Direct Mail Awards of the Direct Mail Advertising Association. Pictorial was selected for the award from more than 300 entries.

Frank Saliehs, vice president, Maule Industries, Inc., Miami, accepted the award on behalf of NCMA during the 43rd Annual Convention of the Direct Mail Advertising Association held in Miami Beach, Florida, October 9-13.

"Concrete Curtain Walls" Title of PCA Film

A new film, "Concrete Curtain Walls," highlighting the use of precast concrete panels has been released by PCA. The 18 minute film, in sound and color, is intended for showing to architects, engineers, contractors, etc., and is available on loan from PCA district offices.

Fain Named TI VP

Leslie D. Fain was elected a vice president of Texas Industries, Inc. at a recent board meeting.

At the meeting, directors declared a regular quarterly cash dividend of 7½ cents on common stock.

Stockholders met at the new cement plant at Midlothian, Tex., where production began recently.

Fain had been general manager of two TI plants in Alexandria, La.

J. D. Bock Named Fanning RM Manager

J. D. Bock has resigned as city engineer at Junction City, Kansas, to take over management of the Fanning Redi-Mix Concrete Co. in Abilene, Kans. Fanning is a new firm.

RCM Columns, Pilasters in New NCMA Book

NCMA has distributed to members a new 150 page book, "Reinforced Concrete Masonry Columns and Pilasters". The book was produced to give sound technical information on design and construction of col-

umns and pilasters to structural engineers, architects and builders.

Included in the illustrated book are typical column and pilaster sections, allowable axial and eccentric load values, recommended minimum design requirements, and recommended construction practices and details. The price of the book is \$2.50.

Blue Springs, Mo. RM Firm Sold

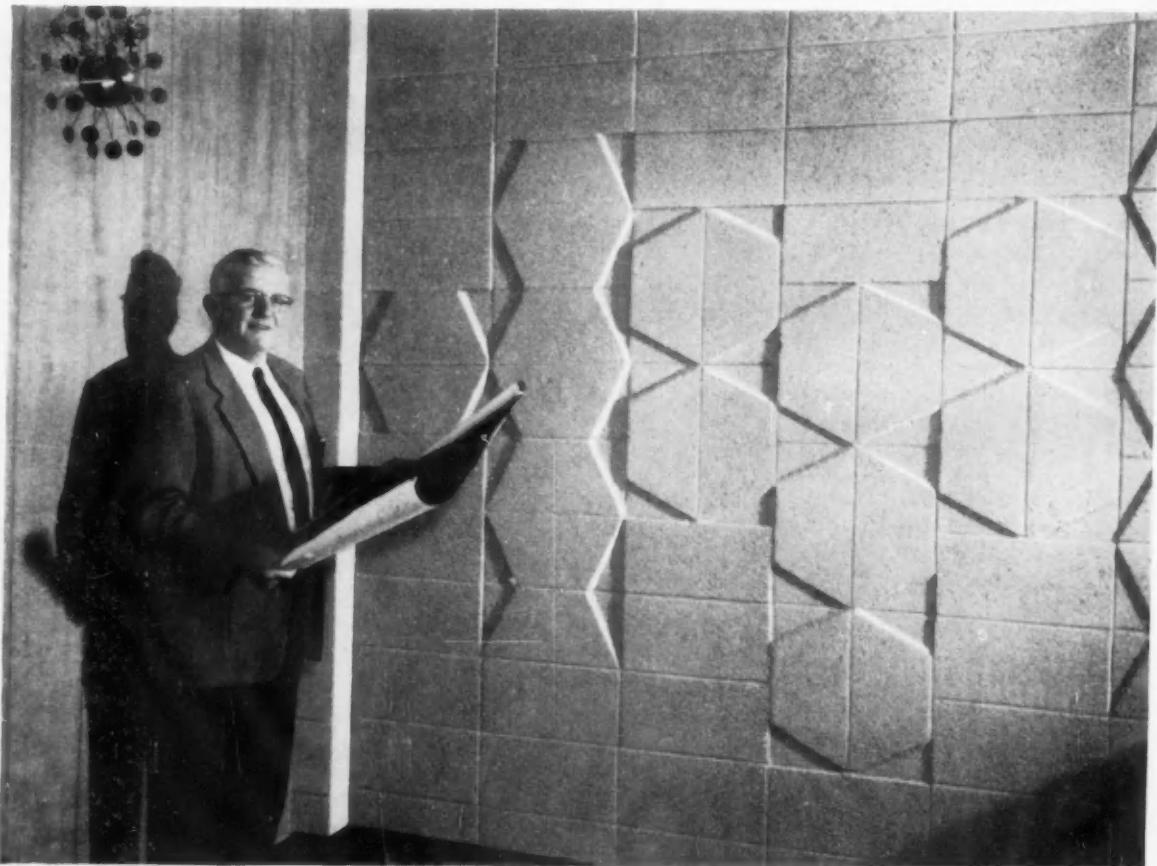
Mr. and Mrs. Virgil Wills have purchased the Ready-Mix Concrete company, Blue Springs, Mo., which was formerly owned by the late J. H. Oldham.

The new name of the firm will be Blue Springs Concrete & Materials Co. Two new buildings, for a warehouse and office, will be built.

Wills formerly was secretary-treasurer of Smith Bros. Ready-Mix Concrete, Raytown, Mo.

Coastal Plains Changes Name

Coastal Plains Concrete Co. is the new name of the Coastal Plains Supply Co., founded in 1945 in Shreveport, La.



Mr. Brooke shows how one of his new units achieves an interesting shadow-wall effect

"We've really expanded our markets with the newer forms of concrete masonry!"

Says EDMUND H. BROOKE, owner, National Brick and Supply Co., Washington, D.C.

"The new types of concrete masonry helped us branch out from the home building market into the commercial and institutional markets. They increased our business 5% — and brought yearly volume to seven million units. Our profit has increased, too, thanks to the higher mark-up on the new units."

Stories like this are common around the country. And it's easy to understand why.

The hundreds of shapes and sizes, colors and textures of modern concrete masonry fit everyone's idea of contemporary design.

These units—plus fresh patterns of laying—create a new look in walls, both exterior and interior. They're at home in any neighborhood—suit any style of architecture.

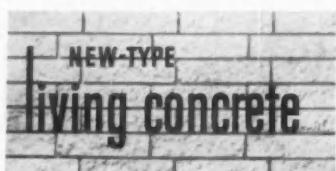
Increasing customer acceptance, plus renewed interest on the part of architects, builders and financing agencies is evident.

Progressive block manufacturers are taking advantage of this fast-growing trend by producing these exciting forms of concrete masonry.

Why don't you look into this source of extra revenue . . . new-type living concrete?

PORLAND CEMENT ASSOCIATION

A national organization to improve and extend the uses of concrete



News

Uniform Building Code Adopts Prestressed

The International Conference of Building Officials has formally approved the inclusion of prestressed concrete into the Uniform Building Code, one of the four model codes used in the U. S., Norman Scott, PCI executive secretary, has announced.

The provisions of the code relating to prestressed concrete construction were first approved by the Structural Engineers Assoc. of California and were formally adopted for inclusion in the Uniform Building Code by the International Conference of Building Officials at their recent convention.

The approval was based on a reason simply stated by the Conference, that "prestressed concrete method of design provides adequate safety based on procedures to be included in the Uniform Building Code Standards, Vol. 3".

Structural Concrete Appoints Skorve

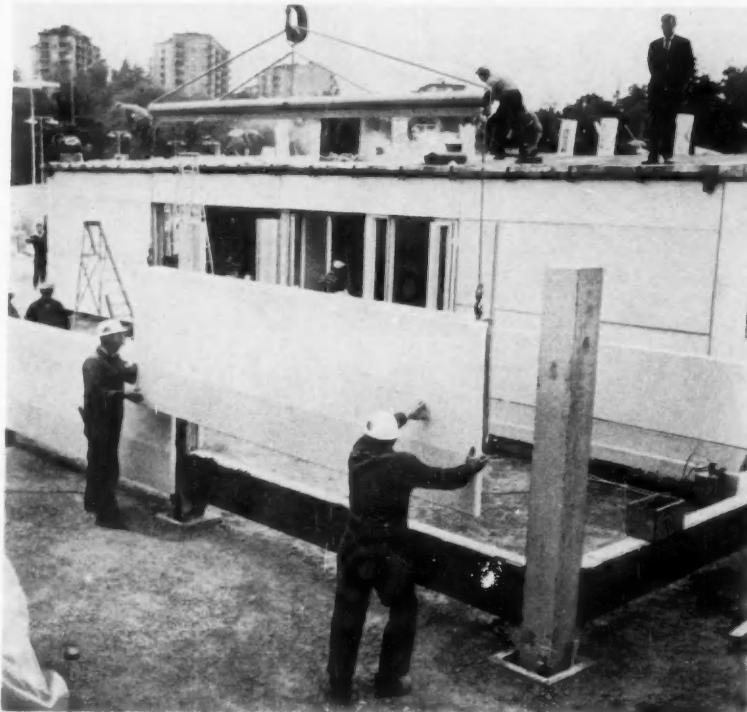
Nils Skorve has been named chief engineer in charge of design and production of prestressed concrete for Structural Concrete Corp., at the Franklin, N.H. plant. Main offices of the company are in Laconia.

Skorve formerly was a vice president, chief engineer with Leap Associates.

Sept. Paving Awards

Gordon K. Ray, manager of the PCA paving bureau, has announced that Sept. paving awards were 3.8 million sq. yds. for roads, 3.2 million for streets and alleys, and 404,000 for airports.

Nine month totals are 47.3 million sq. yds. for roads, 26.3 million for streets and alleys, and 6.2 for airports.



Erected and Decorated—In 11 Hours

A striking feature of the recent Congress of the Precast Concrete Industry, held in Stockholm in June, was the building of a seven room house. Built of pre-fab concrete units with 1,400 sq. ft. of floor space, erection, decoration and furnishing took only 11 hours.

Because the house has a self-bearing roof, interior walls can be changed at will by the resident.

Mobile's Radcliff Changes Name

As a result of diversification in recent years, the name of Radcliff Gravel Co., Inc., has been changed to Radcliff Materials, Inc.

The change was announced at the Mobile, Ala. offices of Southern Industries Corp., of which Radcliff is a subsidiary.

Radcliff began in sand and gravel, branched out into ready mix, and asphalt-concrete, and later into a block operation.

The block division has recently announced the opening of a sales office and block storage yard in New Orleans.

Radcliff uses oyster shells as an aggregate in a block called Radstone.

with Shellite block. The block plant was more than doubled in size last year.

An interesting aspect of the operation, which is based on McDuffie Island in Mobile, is that many of the block are shipped by barge to yards in Pensacola, Fort Walton Beach, Fla., and New Orleans.

ASTM Concrete Group Meets Dec. 8-9

The ASTM Committee C-9 on concrete and concrete aggregates will meet on December 8-9 at the Brown Palace Hotel, Denver, Colo.

Committee C-1 on Cement meets in the same place on December 5-6.

News

Concrete Contractors Meet January 18-20

The annual convention of the National Concrete Contractors Assoc. will be January 18-20 at the Diplomat Hotel, Hollywood-by-the-Sea, Fla.

Montana Concrete Pipe Plant Reactivated

A reactivation of the Montana Concrete Pipe Co. plant, 15 miles west of Butte, has been announced by J. Brad Seely, president of Treasure State Industrial Products, Inc., the parent company.

Production will be culvert, irrigation and sewer pipe in assorted sizes and types. The Butte area plant will also carry an inventory of Treasurelite blocks.

Earl Goldsworthy has been named plant manager; employment is 10. The plant formerly was a standby unit.

Walb Named Program Chairman For 1961 NCMA Convention

Ralph W. Walb, President of the Masolite Division, General Dredging Co., Fort Wayne, Indiana, has been appointed program chairman for National Concrete Masonry Association's 41st Annual Convention and 12th Concrete Industries Exposition to be held next January 30-February 2 in Detroit.

Walb's first action in this capacity was to survey all NCMA members to determine which subjects they considered most timely and interesting for presentation to the more than 5,000 persons from all parts of the United States and Canada who are expected to attend the 1961 Convention.

Based on member-selected topics, the program will cover engineering



Ralph Walb

Wiscasset Block Plant Sold

The Wiscasset (Me.) Concrete Block, Inc. was purchased by Alden P. Lunt, of West Southport, from William Ingram.

Lunt plans to modernize and expand the plant, with Maro F. Hammond as manager.

Meetings

December 5-6, 1960

Midwest Ready Mixed Concrete Assoc. Annual short course, Purdue Univ., Lafayette, Ind.

January 9-11, 1961

Ohio Ready Mixed Concrete Assoc., Driver Training Course, Sheraton Cleveland Hotel, Cleveland, Ohio.

January 12-13, 1961

Wisconsin Concrete Products Assoc., 41st annual convention, Plankinton Hotel, Milwaukee.

January 23-26, 1961

NRMCA, 31st annual convention, Hotel Americana, Bal Harbour, Fla.

Jan. 30-Feb. 2, 1961

NCMA, 41st annual meeting, Concrete Industries Exposition, Cobo Hall, Detroit, Mich.

February 20-22, 1961

National Concrete Products Assoc. (Canada), annual convention, Seigniory Club, Montreal, Que.

February 20-23, 1961

ACI, 57th annual meeting, Chase-Park Plaza Hotel, St. Louis, Mo.

New Block Equipment for Mayclay Concrete

All new equipment has been purchased and the old block plant moved to the main plant of Maclay Concrete, Inc., near Festus, Mo. The site of the old block plant has been sold.

Minn. Durox Plant Begins Output

Durox of Minnesota, Inc., began production in mid-August at its new \$1.75 million plant in Washington County, Minn. Victor C. Johnson is plant superintendent.

Durox headquarters are in St. Paul, with Philip Bettenburg, president; Kenneth Merrill, vice president and treasurer; Eugene Kraut, vice president and general manager; Carl Graffunder, secretary; Arthur Baumester, vice president and director.

From Block to Homes Planned by New Firm

A new Riverton, Wyo., industry eventually plans to eliminate the middleman by supplying everything from construction materials to complete homes.

Dave Wilder, president of Wayside, Inc., reports that the firm will begin operation by making block, brick, and concrete pipe, with 25 people to start.

Plant construction is to begin within two months.

Wilder further reports that eventually the company hopes to get into home and road construction and real estate. This would include building houses and roads with company materials, and selling them.

Thomas Pipe Buys Plant Site

A 41 acre site in Oklahoma City, Okla., has been purchased by Thomas Concrete Pipe Co. for use as the site of a new plant, the company's third.

The proposed plant will manufacture pipe for water lines. Construction is expected to be finished near the first of the year.

The firm's present plants make prestress, and block and sewer pipe.



Clemson Team Wins Design Award

A three-man team of students from the Clemson School of Architecture won top prize in a concrete masonry utilization contest sponsored by the South Carolina Concrete Masonry Association.

Shown from the left: Prof. George C. Means of Clemson School of Architecture; Prize-winner: Thomas J. Lominack; Harlan McClure, Clemson, dean of the architecture school; and Roy Pennell, Jr., SCCMA president and president of Superior Concrete Co., Anderson, S. C.

Participating in the contest were 36 Clemson students, divided into 12 teams. Top prize was \$100 and a trip to a regional AIA meeting.



Chapel Uses Folded Plate Panels

Precast concrete panels in an unusual folded plate design will be used in the new chapel to be constructed on the grounds of St. Joseph Hospital, Burbank, Calif. Architects and engineers are Welton Becket & Assoc.

Whitlock Elected PCI President

Jacob O. Whitlock, president of Midwest Prestressed Concrete Co., Springfield, Ill., was elected president of the Prestressed Concrete Institute at the annual convention, held in late September in New York City.

Whitlock succeeds Randall M. Dubois, president of Freyssinet Co., NYC.

New officers and directors elected at the meeting at the Statler Hilton Hotel are:

Robert J. Lyman, Atlas Structural Concrete, Inc., El Paso, Tex., vice president; Robert A. Matthews, Precast Industries Inc., Kalamazoo, Mich., secretary-treasurer.

New directors elected: Harold R. Hutchens, Carter-Waters Corp.; W. C. Givens, Capitol Concrete Corp.; Robert H. Singer, Ben C. Gerwick, Inc.; Harry Edwards, Leap Concrete, Inc.; Edward Schechter, Stresssteel Corp.; Charles B. Kiesel, Jr., Raymond International, Inc., Elmer D. Clark, Superior Sand & Gravel.

The above were re-elected to the board, with Ezra C. Knowlton, Utah Sand & Gravel Products Corp., continuing as a director.

20% Sales Increase

Prestressed concrete sales in the next 12 months are expected to increase approximately 20% over the present gross of nearly \$1 billion annually, based on expanding government road and bridge building projects; increased private plant and home construction

and more varied uses for the product uncovered recently through research, according to reports given the 650 delegates and exhibitors.

A total of 52 speakers, including international authorities from Russia, England, Italy, Austria, Belgium and Canada presented papers at the meeting, covering the design-flexibility and economics of prestressed, advanced techniques and methods of production and use, and recent research.

These men were in accord as they outlined to convention delegates the rapidly growing role of prestressed concrete in all types of construction, improved manufacturing methods and new building techniques using the product in many ways in their respective countries.

They indicated a bright future for increased utilization of precast, prestressed concrete in all types of construction, pavements and roads, airstrips and bridges, due mainly to vigorous research now being conducted by various independent and governmental agencies.

Prof. V. V. Mikhailov, member of the U.S.S.R. Academy of Construction and Architecture, Moscow, described how in his country mechanization and automation in prestressed concrete manufacture has resulted in a relative saving of almost one-third of the labor cost.

Intensive studies by the British Joint Fire Research Association to



Whitlock

determine the effect of high temperatures on concrete and steel has provided enough information for fire resistance clauses for prestressed concrete to be included in the British Code of Practice. These new techniques are operating well, according to D. A. R. Collins, Director of Research and Technical Services, Cement and Concrete Association, London.

Rust resistant qualities of prestressed concrete and their application in the building of the renowned six mile long Lake Maracaibo bridge carrying connecting traffic between the city of Maracaibo, Venezuela, (more than 500,000 population) and the famous Pan American highway were outlined by Prof. Riccardo Morandi, University of Rome, Italy.

Research results on experimental prestressed concrete runways and taxiways at the Brussels airport were outlined to the architects, engineers, public works administrators and manufacturers in attendance by Prof. Daniel C. C. Vandepitte, University of Ghent, Belgium.

Similar studies of prestressed concrete pavements at the Vienna, Austria, airport were described by Dr. Bruno Freibauer, a prominent civil engineer of that city.

NRMCA Safety Contest Winners

NRMCA has completed the analysis of the results of the 1960 Safety contest, covering the period from July 1, 1959 to June 30, 1960.

The winning company in the Class A competition (companies producing more than 250,000 cu. yds. during the contest period) is the Liberty Corp., Philadelphia, which operated with no injuries to employees, no injuries to non-employees and only three property damage accidents during the contest period.

Class B Winner

The winning company in Class B competition (from 100,000 to 250,000 cu. yds.) is Clifton Concrete & Supply Co., Cleveland, which operated with no injuries to employees, no injuries to non-employees and only three property damage accidents during the contest period.

Ten companies entered in the Class C competition (from 50,000 to 100,000 cu. yds.) had accident-free records.

Morse Winner

Following the policy previously established by the Joint Committee on Safety, Morse Sand & Gravel Co., Pawtucket, R.I., the company with the greatest combined total of yards of concrete produced and man-hours worked receives the trophy in the case of identical scores.

In recognition of their accident-free records, Certificates of Achievement in Safety will be awarded to the following Class C entrants:

Andrews Concrete Products & Supply Co.; Builders Concrete,

Inc.; Cairo Redi-Mix Corp.; M. J. Grove Lime Co.; McCurdy-MacKenzie Supply Co.; Reading Central Mixed Concrete, Inc.; Ready-to-Pour Concrete Co.; C. W. Shirey Co.; and Transit-Mix Concrete Co.

Class D Winner

Thirty-three companies entered Class D (from 25,000 to 50,000 cu. yds.) with accident-free records. On the same basis as in Class C, the trophy was awarded to Spangler & Sons, Inc., Shelby, N.C.

Certificates of Achievement in Safety will be awarded to 32 companies.

Forty-three companies entered in Class E (less than 25,000 cu. yds.) had an accident-free record. Again, on the same basis as C and D winners, Triangle Construction Co., Kankakee, Ill., received the trophy. Certificates will be

awarded the other 42 companies.

Special certificates will be awarded to the following eight companies which have had accident-free records for the last five consecutive years:

Buffalo (N.Y.) Slag Co., Inc.; Concrete Materials, Inc., Morristown, Tenn.; Gethmann Concrete & Materials Co., Gladbrook, Iowa; Daniel O'Connell's Sons, Inc., Holyoke, Mass.; Ready Mixed Concrete Co., Annandale, N.J.; C. W. Shirey Co., Waterloo, Iowa; The Trumbower Co., Inc., Nazareth, Pa.; and Worthington Ready Mix Concrete Co., Worthington, Minn.

All trophies will be presented at the NRMCA annual meeting in Bal Harbour next January; certificates will be mailed.

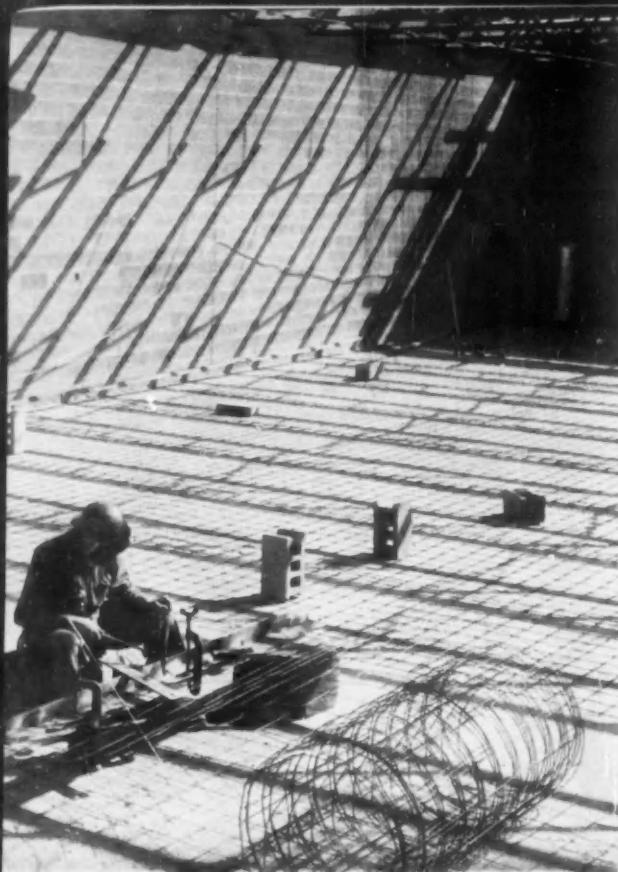
This year, 318 companies enrolled in the contest, the second largest participation in the 14 year history of the competition.

Lin Tee Franchisees Meet



Production techniques and schedules, framing schemes and Lin Tee bridge promotion were a few of the subjects discussed when 48 Lin Tee producers met at the Statler Hilton in NYC on Sept. 26.

Prof. T. Y. Lin, shown at left, spoke on the future of prestressed concrete.



Welder tacks longitudinal wires to 3" wide copper bar; clamps hold wire and bar in contact.



One of the sites for the dry-type transformers. Fabric and cables will be embedded in second course of concrete.

Reinforcing Wire

A revolutionary heating system, in which the reinforcing wire fabric in a building's concrete floor slab serves also as an electric heating element, has been installed as a test. The unusual heating system was built into Northern States Power Company's new 6500 square foot service center and warehouse, on the outskirts of Minot, N.D., for which the company furnishes both electric power and telephone service.

The electric heating system, which will be tested in a building subject to normal use and under everyday conditions (including North Dakota winters which sometimes produce minus 40 degree temperatures) is revolutionary from four standpoints — architect, owner, contractor and power company.

Eliminates Furnace Room

From the architect's standpoint, the use of concrete reinforcement for heating eliminates the need for a furnace room, and thus provides more usable cubic space. (Space must be provided for the necessary transformers, however, in this case, above ground, along the building's center partition.)

From the standpoint of the owner, the "double" use of welded wire fabric in the floor slab — as reinforcement, and as heating element — represents economy in use of material, and saves money over the cost of the more conventional systems of radiant heating, such as copper tubing for circulating hot water, or especially manufactured electric resistance cables. The elimination of furnace equipment likewise cuts costs, but balanced against this is the cost of the necessary transformers (\$675 each, in this case).

Used Mostly At Night

Another owner economy incorporated in this design is that the floor grid will be energized primarily at night to store heat in the floor and underlying area thereby eliminating an increase in the daytime demand factor. Baseboard type resistance heating is provided to supplement the 'stored heat' during late

Used As Heating System

afternoon hours. However, if required, a thermostat will override the preset schedule to energize the floor grid during daytime hours.

As for the contractor, the widespread adoption of electrically charged concrete reinforcement, will change his way of installing welded wire fabric, and will require learning techniques to make the fabric function as electric conductor as well as strengthener of the slab.

Three Types of Wire

In the Minot installation, three different styles (or types) of welded wire fabric were used — 66-44, 66-66, and 66-88. The first pair of figures in each case refers to the 6 inch spacing of the wires; the second pair of figures designates the gauges of the wires, ranging from No. 4 (nearly $\frac{1}{4}$ " diameter) to No. 8 (about $\frac{1}{6}$ " diameter). Since, for reinforcement purposes alone, 66-66, 66-88, or even 66-1010, may be specified, depending upon anticipated use of the floor slab — office, warehouse, etc. — the heavier styles in this case were dictated by electrical considerations.

In the major warehouse area, the heavier 66-44 was used in order to carry a heavy flow of current and provide the desired floor temperature. In the office area, 66-66 was used, because here, lower current flow and floor temperature were planned, the baseboard units helping to heat this space. The lightest style, 66-88, was placed in a sectional area of the warehouse, where less current will be required in order to maintain the desired floor temperature.

The major problem to be solved by the designer in effecting dual use of the wire fabric as both reinforcement and electrical conductor, was how to accomplish both these functions, without impairing one or the other. To be effective as reinforcement in a concrete slab, welded wire fabric must be overlapped for continuity of crack-controlling ability.

Naturally, in order to maintain a proper flow of current, the designer had to electrically separate the overlapping lengths of fabric.

This was effected by placing between the lengths of fabric, a 2 inch wide, $\frac{1}{2}$ inch thick strip of cement asbestos lumber (transite), tied securely in place every 12 inches by electrical scotch tape, wrapped about the "sandwich", formed by the insulation and the overlapping wires.

Copper Bars Welded

In order to apply the electric potential to the lengths of wire fabric, and establish a path for the flow of the current, $\frac{1}{4}$ " x 3" wide copper bars were welded across the full width of each length. At the ends nearest the transformers, which hugged the central partition wall (between the warehouse area and the offices and shops) these bars were five feet long; but at the far side, the copper buss bars were 9'-10" long, bridged two strips of fabric and served to conduct the current from one length to its immediate neighbor. Thus, the current, lead by cable from the transformers to the end of one length of fabric, followed a U-shaped path, down one length, back the other, and back to the transformer.

Seen from above, the overlapping (electrically separated, however) lengths of wire fabric, with their connecting cables and copper buss bars, looked like the elements from an immense toaster.

Two Layer Slab

In order to facilitate the placement of the wire fabric, the welding of the copper buss bars, and the insulating and tying of the overlapping lengths, the designer specified that the floor slab be constructed in two stages. The first stage was a two inch thickness of unreinforced concrete placed over a polyethylene vapor barrier on a well compacted fill of 6" of selected gravel. The surface of this first two inch course of concrete was purposely left rough for bonding with the next course.

After initial set of this first, 2" course of concrete, the electrical contractor was permitted to move onto it, and, having the benefit of its flat surface, was able to place the fabric, attach the buss bars, and

Continued on page 25



Pallet loads are tiered four to seven high, depending on size of units in cubes.

High Stacking Boosts Storage 33% at Blocklite

Without adding a single square foot of property, Blocklite Company, Selma, Calif., has increased finished product storage space by 33 per cent.

How? By expanding outside storage space vertically, instead of horizontally. Increased vertical storage space is made possible by rented fork trucks equipped with high-stacking uprights.

Blocklite Company, producer of lightweight and heavyweight concrete blocks of 350 different sizes, shapes and colors, stores its inventory on the extremities of a narrow 63,870 sq. ft. plant property. Manufacturing and shipping operations are conducted in the center area, some distance away from storage areas. The plant operations require fork trucks to make continual trips from manufacturing to inventory and back to shipping area to handle up to 125 tons of concrete products each eight-hour day.

Time and Motion Study

The company's management realized that acquiring additional available land for finished product storage and outside curing would greatly increase the distance of fork truck trips. So a time and motion study was conducted which showed that the company would save time and equipment wear by making more vertical, instead of horizontal, movements with trucks.

Mobile materials handling equipment selected for the storage job had to meet several requirements dictated by plant layout. Fork trucks had to be able to tier high, yet work in steam curing kilns where headroom is limited. Also, fork trucks had to be able to operate in existing 54-inch wide aisles.

5000-Pound Capacity Gas Fork Trucks Selected

Gray Lift, Inc., the Fresno dealer for Clark Equipment, worked out a plan whereby William Grindle, president of Blocklite Company, could turn in his old fork trucks and rent three new ones.

The dealer provided gas-powered Clarklift CY 50 fork trucks of 5000 pounds capacity equipped with triple stage uprights. These vehicles can stack as high as 170 inches, yet can operate where headroom is limited to 87 inches. The CY 50 is only 42 inches wide and works easily in narrow aisles in the storage area.

Special Attachments

Because of the high lifts involved, the three fork trucks are provided with special stops so that forward and reverse tilt of the uprights are restricted. Normal tilts on the CY 50 are six degrees forward and fifteen degrees backward. Blocklite's trucks can only tilt two degrees forward and five degrees backward. Tilt restriction was provided to reduce chance of blocks falling from pallets and to prevent tipping of work trucks when high tiering loads.

All machines are fitted with six-tine block forks which can be moved from left or right of truck center by a hydraulic side-shifter attachment.

Company Decides to Rent

Renting of fork trucks, rather than out-right purchase, appeared more attractive to Blocklite's management for several reasons.

The rental plan eliminated outlay of capital required for outright purchase. And under the rental plan materials handling costs can be predicted and budgeted accurately since equipment is rented on a monthly fixed-fee basis.

Under terms of the rental agreement, the dealer is responsible for all maintenance on the fork trucks. This feature of the rental plan permits Blocklite's management to concentrate on their own production problems without having to be concerned about fork truck upkeep or loss of production due to downtime.

This guarantee that the company will have three fork trucks in working order at all times is an important consideration at Blocklite where uninterrupted handling capacity is vital.

Blocklite Company uses its three Clark fork trucks for loading and unloading steam kilns, carrying cured block to inventory storage, and loading-out flat bed trailers with finished products.

Automated Plant

Manufacturing facilities have been automated to a large degree. Raw materials are automatically batched by a Ramsey ABC system which includes automatic water feed and moisture control. After block are formed, a Besser-Matic rack loader takes the block from the Besser block machine on steel pallets and automatically indexes them on racks which hold 24 pallets.

Each located rack is taken to steam curing rooms by fork trucks. Steam curing rooms have a capacity for 24 racks. Headroom is restricted to 87 inches, just two inches more than height of the CY 50's triple stage upright when it is collapsed.

After fork trucks fill each curing room, the kiln is sealed to hold low pressure steam. Once proper curing temperature is reached, steam automatically shuts off. Racks of block are left in the curing rooms overnight.

Rack Unloader

Racks of block are removed the following morning by fork trucks and delivered to the Besser-Matic rack unloader. This machine automatically removes cured block from pallets, returns pallets to the block forming machine, and sends cured block on a conveyor system to a Besser semi-automatic cuber.

At the cuber one man builds block into inter-locking cubes, 40 by 48 inches and weighing about 2750 pounds. When a cube is built, a fork truck picks it up and carries it to outside storage area for further curing and drying. Blocks are held in inventory for a minimum of one month before shipment to customers.

In the outside storage area, pallet loads of block are tiered four to seven high, depending on the size of product being handled. By tiering 170 inches high, 4800 cubes can be stored in the same area where only 3600 cubes could be stacked formerly.

In addition to realizing a 33 per cent increase in storage area, Blocklite Company has also been able to reduce its labor costs by utilizing available air rights in storage yard. Grindle pointed out that expanding the storage yard by acquiring additional square footage would have required considerable investment in land and paving plus the cost of one man who would spend almost all his time handling inventory at an increased distance from the shipping area.

TI's Willson Elected ESCSI President

The Expanded Shale, Clay and Slate Institute held its eighth annual meeting at the Shoreham Hotel, Washington, D. C., October 10 through 14, 1960. Approximately 60 members, wives and guests attended.

The technical committees evaluated progress reports of several Institute research programs including its extensive shrinkage and creep project which has been in operation for nearly a year. An inspection was made of this work at the National Bureau of Standards where 20 expanded shale and 4 normal weight aggregate concretes are being studied.

New Masonry Manual

The Institute's latest publication, "Concrete Masonry Manual," and the third edition of the "Bridge Deck Survey" were presented to the membership at this meeting. The "Concrete Masonry Manual" is a 48-page booklet containing technical information as well as suggested specifications for expanded shale concrete masonry construction. The latest edition of the "Bridge Deck Survey" contains information on more than 150 structures with expanded shale concrete decks, many of which also have expanded shale concrete superstructures.

Technical Session

An open technical session concluded the meeting with the presentation of four papers on the general theme of structural lightweight concrete for the benefit of government and private engineers and architects in the Washington area:



New ESCSI officers, from left: Chandler, Willson, Kennedy, Park. Not shown is Leroy A. Thorsen.

"Research and Development Programs of the Expanded Shale, Clay and Slate Institute," by Carl M. Rollins; "Design and Control of Structural Lightweight Concrete," by Otto C. Frei; "An Interim Report on the Creep and Shrinkage Program at the National Bureau of Standards," by Thomas Reichard; "Some Approaches to Structural Lightweight Concrete Design," by Daniel P. Jenny.

Among the guests of the Institute at this annual meeting were producers of expanded shale from Denmark, Norway and Belgium.

New Officers

Officers for 1961 are: Cedric Willson, Texas Industries, Inc., Dallas, Texas, President; Leroy A. Thorsen, Consolidated Concrete Industries, Ltd., Calgary, Alta., 1st Vice President; Ben F. Park, Buildex, Inc., Ottawa, Kans., 2nd Vice President, James M. Chandler, Chandler Materials Co., Tulsa, Okla., Treasurer; and Lester R. Kennedy, Light Aggregates, Inc., Rapid City, S. Dak., Secretary.

Two new members were accepted at this meeting — Big River Industries, Baton Rouge, Louisiana, and Empire Building Materials Co., Portland, Oregon — bringing the total number of plants in the Institute to 45.

Headquarters for the Institute are maintained in the National Press Building, Washington, D.C., with Frank G. Erskine, Managing Director.

Oklahoma Entz Stone Begins Business

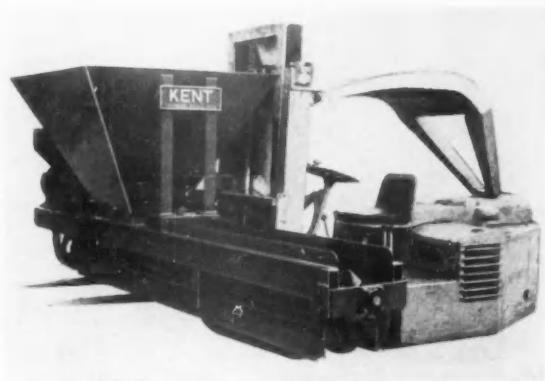
Oklahoma Entz Stone, Inc., recently began operation in Oklahoma City, producing a simulated stone in 48" lengths, 6 $\frac{1}{2}$ " high and in various thicknesses.

After curing, the product is split into two veneer thickness units of 3 $\frac{1}{4}$ ". Several colors are available, with the product giving an attractive and structurally sound wall.

The plant uses Kent Machine equipment. President is G. P. Entz.

What's New in

EQUIPMENT and MATERIALS



Kent Form Charger

Kent has designed a new machine, essentially a machine with hopper and gas engine driven spiral feeder, to deliver concrete to prestress-precast forms. Benefits are said to be faster operation; avoiding the possibility of overcharging with spillage; more even delivery and more evenly vibrated material, with less manpower. This all as compared with use of a crane-handled concrete bucket.

The Charger is designed to be mounted on a fork lift truck, as shown. The unit illustrated has a 1 cu. yd. hopper but larger sizes are available.

Kent Machine Co., Cuyahoga Falls, Ohio.

Enter Z35 on Inquiry Card



Portable Batch Plant

A 30 ton decumulative portable batch plant has several new features, including a low profile. The plant was designed to be set up in less than an hour, needing only a small dirt ramp to set it for front-end loader charging.

The 30 ton overhead bin, combined with the new decumulative weigh system, eliminates the need for a weigh batch bin. Several batches of concrete, up to 7 yards, can be weighed out without re-charging the storage bin. The overhead bin, only 11' from the ground, eliminates need for crane or belt elevation charging.

Ross Porta-Plant, Box 416, Brownwood, Tex.

Enter Z36 on Inquiry Card



Combination Block, Septic Tank Unloader

A combination unloader has been designed to load septic tanks, set them on the job site, install lids and also to load and unload block. The unit can handle two cubes of block at a time.

The rig is capable of handling weights up to 8,000 lbs. All power units and controls are mounted on the body, not the truck, with the rear-bed mounting giving the driver a complete view of loading and unloading.

There's 7' of overhang behind the truck bed, plus about 4' to the rear wheels, to allow for such operations as placing block inside foundations.

Cook & Ingle Concrete Products, Inc., 305 Fernwood Ave., Dalton, Ga.

Enter Z37 on Inquiry Card

Portable Two-Way Radio

A small transistorized two-way radio has been designed to give a portable, pocket-sized radio system. With range of up to 5 miles, the unit operates with a 10 transistor circuit powered by 8 miniature penlight cells, with 40 hours of operation reportedly at a cost of 2¢ per hour.



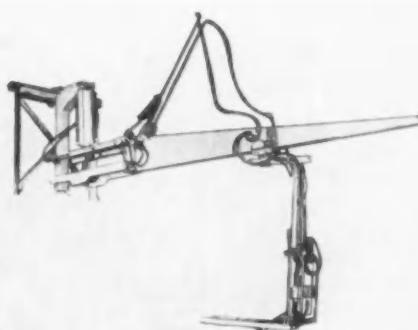
It has a collapsible telescoping antenna plus an external antenna jack for fixed or mobile use. Operating in the 27 megacycle range, no FCC license or permit is needed.

The Duo-Com 100 is $1\frac{5}{8} \times 1 \times 7\frac{3}{4}$ ", weighing 20 ounces.

The man in the middle, in the photo, is shown with one of the units.

Osborne Electronic Sales Corp., 13105 S. Crenshaw Blvd., Hawthorne, Calif.

Enter Z38 on Inquiry Card



Off-Bearing Hoist

Oswalt has introduced a new, improved off-bearing hoist, the model 60. It features a long stroke cylinder and air flow control, and can be fitted with an air vise or magnet. The hoist is adaptable to any make of block machine.

The power factor has been accelerated to permit the cylinder, powering the hoist, to pull its load and hold the piston and piston rod in perfect alignment at all times.

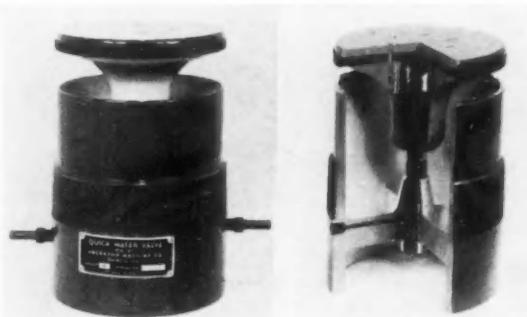
New attachments eliminate the problem of hose nuisances when the operator nears the top of block on the rack. There also is a swivel type arrangement for handling the basket; an air flow control valve; an air vise on the

bottom of the pallet platform to efficiently and safely pick up two pallets, or up to four pallets if necessary.

The air vise permits placing two pallets of block in the rack bottom without returning to the top of the rack to remove empty pallets before placement of green block, as is done with the magnet method.

Oswalt Engineering Service Corp., 1335 Circle Ave., Forest Park, Ill.

Enter Z39 on Inquiry Card



Quick Water Valve

An air operated 5" water valve, for concrete batch mixing, can deliver 100 gallons of water within 14 seconds. Basically being a self contained dump valve, the unit is positive open, positive close, fast acting, and uses only a small number of parts. It can be completely disassembled by removing six screws and a nut; because no operating or control parts extend through the housing, it should have a long service life.

In addition to the 5" valve, an 8" is also available.

Åwerkamp Machine Co., 237 N. Seventh St., Quincy, Ill.

Enter Z40 on Inquiry Card

Calcium Chloride Manual

A 40 page technical manual on "Calcium Chloride in Concrete" is now available, free. It contains data on major effects of calcium chloride, early and ultimate strength, cold weather protection, high early strength cement, and air entrained concrete.

It also includes research on the relation of calcium chloride to early strength, both compressive and flexural, ultimate strength, curing, workability and density, cold weather concreting, and a section deals with calcium chloride versus extra cement.

Calcium Chloride Institute, 909 Ring Bldg., Washington 6, D. C.

Enter Z41 on Inquiry Card

Cold Weather Work Glove

A new process of impregnating warm jersey gloves with tough, non-slip vinyl is reported to give 10 times longer wear. Other benefits claimed: safe grip, oil and water repellency, the flexibility and comfort of ordinary jersey. The new glove, Tuf Duk, is recommended for outdoor work, particularly in cold weather, in styles that include knitwrist, slip-on and safety cuff.

Edmont, Inc., Coshocton, Ohio.
Enter Z43 on Inquiry Card

undulate violently, breaking down arching and plugging.

The unit is furnished complete with the mounting structure supporting a 5' strip of steel, 18 to 24" wide, on which is mounted the rotary electromechanical vibrator. Additional lengths of strip steel can be welded on to make up to a 50' maximum length.

Syntron Co., 394 Lexington Ave., Homer City, Pa.

Enter Z44 on Inquiry Card



signed tandem suspension system and special 24" metallic core tires.

The girl in the photo isn't the operator; just a Chain Belt secretary.

Chain Belt Co., Milwaukee 1, Wis.

Enter Z45 on Inquiry Card

BIGGEST TRUCK MIXER

Chain Belt claims that this is the biggest truck mixer in the world. This Rex horizontal truck mixer permits loads in excess of 15 cu. yds., and is mounted on an off-highway diesel carrier. Loaded, the unit weighs over 50 tons; empty, 42,840 lbs.

It was made for an eastern ready mix firm, built with specially de-

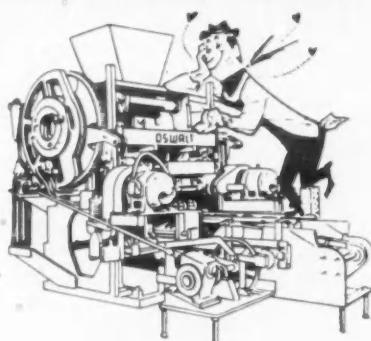
Bin Vibrator

The new Syntron internal bunk vibrators use a powerful rotary vibrator mounted at the top of a long strip of steel. The unit is suspended into the bunker, directly over the discharge opening. In operation the vibrator causes the steel strip to

Hileman Named Mgr. of Durant Detroit Office

John N. Hileman has been promoted to manager of the Durant Mfg. Co. Detroit sales office. He has been with Durant in the Milwaukee office for four years.

It's Easy Living with any OSWALT DEVELOPMENT



It may be a new Model 60 Block Machine . . .

Rotary Brush . . . Model 60 Hoist . . . Vibrating
Shaft . . . Cam . . . Unifill Mold or a Pallet
Moving Lug . . . all are designed and built to help
produce better BLOCK, faster and at lowest cost.

See 1960 Issue of Concrete Industries Yearbook or write to

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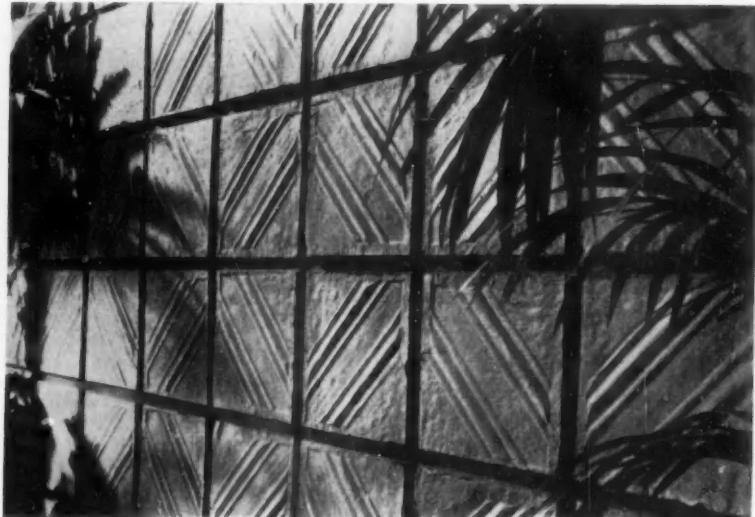
Thomas Named VP by Jaeger Machine

Andrew C. Thomas has been elected vice president in charge of new product development by the Jaeger Machine Co., Columbus, Ohio. Thomas, who has been with Jaeger since he graduated from Ohio State Univ., has been assistant general sales manager for the past five years.

He also is a member of the NRMCA board, and the NCMA Manufacturers Division, serving as chairman of the latter group.

Universal Atlas Plans St. Louis Station

Universal Atlas Cement has announced plans to construct a cement distributing station in St. Louis, Mo. Arrangements have been made for a site and the start of construction now depends on city approval.



Emco Introduces Aztec Stone

A new unit, Aztec Stone, was primarily designed for use in modernizing or designing commercial building exteriors. Made by Emco Cement Products, Inc., of Birdsboro, Pa., it reportedly sells for \$2.3 per square foot, installed.

With three basic patterns, Emco is ready to increase distribution of the new units.

Master Builders Opens Research Center

A modern, complete concrete research laboratory has been opened in Cleveland by Master Builders Co., for research into designing, producing and controlling high quality concrete and other masonry products.

The laboratory occupies the lower level of the new national headquar-

ters, with general and executive offices on the other three floors. The lab itself is under the direction of Thomas M. Kelley, vice president for research, and Herbert K. Cook, vice president for engineering.

The heart of the center is the concrete laboratory where investigations

of admixture formulations, cement, aggregates and mix proportions are conducted.

In this laboratory, concrete mixtures are made and specimens prepared for testing all characteristics of concrete in the plastic and hardened states.



From left, vice presidents Cook and Kelly with MB Pres. Stephen Benedict inspect testing machine.



Praschak Publishes Plant Tour Book

Praschak Machine Co., of Marshfield, Wis., has recently published a booklet titled, "We Invite You To Tour Our Factory".

The booklet is illustrated with photos of the Praschak plant and manufacturing processes and methods.

Analysis of Aggregates Larger Than 1½-In. Sieve." Copies of this report may be obtained from the Director for the sum of \$0.50 each.

The report describes aggregates in the 1½- to 3-in. and the 3- to 6-in. size ranges sampled by the following methods: clamshell from stock-pile, trenching loaded trucks, from conveyor belt loading bins, and during bin discharge. All samples were tested for sieve analysis. It is concluded that: any of the sampling methods

are satisfactory; 100-lb samples of 1½- to 3-in. aggregate and 300-lb samples of 3- to 6-in. aggregate are large enough; diameter of wire in 5- and 6-in. sieves should be 0.360 to 0.530 in.; hand-sieving of aggregate coarser than 3-in. sieve can be satisfactorily accomplished. Three appendices are included: a revised test method for sieve analysis of aggregate; revisions to the method of sampling aggregate; a discussion of sample sizes.

Army Engineers Publish Two Concrete Studies

The U. S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi, has recently published Technical Report No. 6-514, "Influence of Fine-Aggregate Grading on Properties of Concrete: A Review of Literature." Copies of this report may be obtained from the Director for the sum of \$0.50 each.

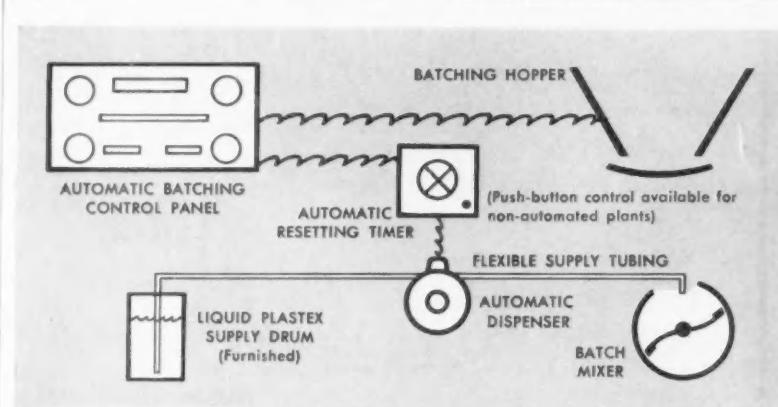
A literature search revealed that in most investigations dealing with the amount of material passing the No. 100 sieve that will produce satisfactory concrete, it was indicated that less than 15% of this size material is desirable, and that 10% is optimum for mass concrete. The consensus was that fines cause an increase in the water requirement and influence air content.

One of the studies reported indicated that high air content did not decrease concrete strength excessively and seemed to be beneficial. Thus, it appears that a mass concrete mixture low in fines and having a high air content may prove satisfactory.

It was generally concluded that the fine-aggregate grading influences in varying degrees the workability, durability, strength, water requirement, air content, bleeding, and density of concrete.

It was also found that satisfactory concrete could be produced with a sand of which 5% passes the No. 50 sieve and none passes the No. 100 sieve. Thus, it appears that good-quality concrete can be produced with fine aggregate deficient in certain sieve sizes.

The Waterways Experiment Station has also recently published Technical Report No. 6-543, "Methods for Sampling and Determining Sieve



NOW-add liquid plasticizer to your block mix automatically...accurately ...with no equipment investment

If you've been delaying using a plasticizer in your automatic or semi-automatic block plant because (1) you don't have the necessary dispensing equipment or (2) you don't know what type of plasticizer is best...here are the answers you want!

1 Equipment furnished free

When you use *Liquid Plastex Concentrate*, Edick Laboratories furnishes (on a loan basis, without cost) the complete metering system diagrammed above. This dispensing unit is absolutely fool-proof...guarantees positive accuracy regardless of temperature or humidity...dispenses correct amount of plasticizer for any mix. Connects easily and operates automatically with any type automated batching equipment, or can be push-button operated in semi-automatic plants.

2 Liquids give best results

Edick's *Liquid Plastex* is a highly-concentrated plasticizer formulated specifically for use in automatic and semi-automatic plants to give lighter colored, better tex-

tured, smoother surfaced block. In contrast to powders, liquids meter accurately, will not cake in storage or clog equipment...are not affected by high temperature or humidity.

What's more, *Liquid Plastex Concentrate* is completely soluble at below freezing temperatures. Economical to use...it actually costs less than $\frac{1}{3}$ cents per bag of cement. You'll save more than twice its cost in reduced wear on mold box liners...with fewer culls and seconds.

Write today for details

We'd like to tell you more about this free dispenser offer, and advantages of using *Liquid Plastex Concentrate*. We can also give you the name of a nearby experienced user.

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Reinforcing Wire

Continued from page 15

tie the insulation without fear of breaking or damaging the fragile strips of asbestos cement.

With the fabric in place, cables bolted to the buss bars and led to the transformer locations, and electrical tests made to be sure of proper current flow through the grid, the remaining four inches of concrete slab was placed. Conventional concrete was used, and concreting was done in normal manner.

The only departure from usual wire reinforced concrete construction procedure was dictated by the extreme care taken to prevent displacement of the fabric lengths or damage to the insulation. Usually, wire fabric is supported or "hooked up" into the concrete as the pour progresses, in order to position the reinforcement at or above the mid-point where it's most effective in controlling and minimizing cracking.

In this case, however, it was decided to leave it in position on the previously placed 2" course of concrete, with the expectation that some slight displacement upward would occur (without damage to the insulation) and thus it would approach the ideal position.

Slab Placing, Forming

The 3000 psi 28 day ready mix concrete was allowed to moist cure 7 days under Sisalkraft. The floor area of each half of the building was divided into five slabs, each approximately 17 x 40 feet in size. The odd numbered slabs were poured first, and after they took initial set, the forms were pulled, and the even numbered slabs butted up against them. Later, 1½ inch deep contraction joints were sawed between the slabs.

W. R. Williams, Minot division manager, and his general superintendent, Loren E. Linder, were the moving spirits behind the Minot test installation. Engineer Harold Teachout of the NSP Minneapolis headquarters office was technical adviser in charge of design.

Initial planning for the new facility, which will include service truck garage, warehouse, meter shop, line crew room, telephone service facilities and office space was done by architect James V. DeLoi of Minot.

Consultant to the architect, and designer of preliminary plans for the dual purpose welded wire fabric heating system, was Kenneth O. Tompt, electrical consulting engineer of Fargo, North Dakota.



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CPAW Elects New Officers

Members of the Concrete Products Association of Washington elected new officers and awarded two Honorary Memberships at their 31st Annual Summer Meeting held June 24-26 at Gearhart, Oregon.

In recognition for past services to the concrete products industry, Honorary Memberships were awarded to Charles Delling, formerly with Puyallup Shope Brick Co., and to John R. Sherman, Yakima Cement Products Co.

Robert W. Hutton, General Manager, Bellingham Builders Supply Co., was elected president of the Association. Hutton has just completed a term as president of the Bellingham Chamber of Commerce. Other officers are: Vice President, H. James Lindstrom, Superior Concrete Products Co., Seattle; Secretary, H. L. James, Longview Concrete Pipe Co., Longview; and Treasurer, Don Jordan, Layrite Concrete Products of Seattle.

The following were named directors: Mel C. Ellis, Spokane Concrete Conduit Co., Spokane; Richard J. Hews, Yakima Cement Products Co., Yakima; John L. Hutsell, Associated Sand & Gravel Co., Everett; Lawrence Slorah, Twin Cities Concrete Pipe Co., Pasco; and W. S. Wilson, Graystone, Inc., Seattle.

Cottage Booklet Published by PCA

"Leisure-Time Cottages", a 12 page booklet featuring typical designs and floor plans for 8 lakeside or seashore cottages, has just been published by PCA.

Marquette Announces Price Increase

Marquette Cement Mfg. Co., Chicago, announced moderately increased prices, guaranteed for the full year of 1961, at seven of its mid-west and south shipping points.

At five of these points, an increase of 5c a barrel, or about 1 1/2%, will go in effect January 1. At the other two stations, the increase will be 10c a barrel or about 3%.

Prices at two shipping points in Mississippi will not be raised because of a prior existing company guarantee.

Manual on Good Concreting Issued

The Concrete Improvement Board of Metropolitan Detroit has published a manual on recommended concreting practices, developed primarily for the metropolitan Detroit, Mich., area. The compilation covers general recommendations, exposed portland cement concrete residential paving, house basements, winter concreting, hot weather concreting, and includes a ready-mixed concrete purchase recommendation.

It is expected that future recommendations will be forthcoming from the Board on such subjects as finishing of concrete slabs, a buyer's guide for concrete, and others.

The compilation represents the cooperative effort of the various segments of the concrete industry in the Detroit area. It is intended as a practical guide to good practices, through which the level of excellence in concrete construction may be voluntarily elevated by its practitioners. The recommendations have been developed through the exchange of information and ideas among the Detroit CIB members.

The book is a hard cover three-ring binder, 10 x 11-in. format. The price of the publication is \$1.75 for the special three-ring binder and \$0.50 for each recommendation: General Recommendation on Responsibility for Concrete Control, Sampling, and Testing Laboratories—3 pp.; Recommendations for Exposed Portland Cement Concrete Residential Paving—3 pp.; Recommendations for Exposed Portland Cement Concrete Residential Paving—3 pp.; Recommendations for House Basements—7 pp.; Recommendations for Winter Concreting—2 pp.; Recommendations for Hot Weather Concreting—3 pp.; Ready-Mixed Concrete Purchase Recommendation—2 pp.

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Year Around Concreting Pamphlet Available

An 8 page free pamphlet, "Year Round Concreting", is available to concrete users summarizing the new ACI standard recommendations for cold weather concreting.

It includes sections on accelerators, preparation before concreting, winter concreting objectives, and production required.

A 2 page chart illustrates data on the effect of 2% calcium on temperatures of 73, 55, 40 and 25 F on Type 1 and Type 3 cements.

Copies, free, from Calcium Chloride Institute, 909 Ring Building, Washington 6, D. C.

NRMCA Safety Contest Forms Mailed

NRMCA in late June mailed forms for entries in the association safety contest. This contest covers a period from July 1, 1959 to June 30, 1960, with five company classifications, depending on size of output.

Winners will be presented awards at the NRMCA annual meeting in January at Bal Harbour, Fla.

Marable Named Exec VP of Ready Mix Concrete

J. W. Birdwell, president of Ready Mix Concrete Co. in Fort Lauderdale, Fla., has announced the election of Gary L. Marable as executive vice president.

Marable, who had left the company, was a founder of the firm when it began in 1947. He will resume duties as general manager of the Ready Mix operation, which has three plants.

CMA Designs Outlet Box

A new outlet box, especially designed for use in concrete masonry construction, has been made available by the Bowers Manufacturing Co. The need for such a box to facilitate electrical installations in masonry buildings was recognized some months ago by the Concrete

Masonry Association, the organization of concrete block plants in California.

The project of procuring a suitable outlet box and drawing up an electrical detail sheet was assigned to the Special Projects Committee of the association which has worked with Bowers Mfg. Co. and the National Electrical Contractors Association to this end.

This box, now available through Bowers, is especially planned to en-

able its use in other fields of construction as well as being expressly adapted to concrete masonry needs.

Detail sheets on electrical construction in conjunction with concrete block construction are now being drawn and as soon as properly approved will be published and available through the CMA office.

Parties who have worked with CMA to develop this versatile box are Allen F. Knickrehm of the N.E.C.A. and Lester Wood of Bowers Mfg. Co.

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PORTLAND CEMENT

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Museum Prefers Block



Concrete block has found a new champion in what seems at first glance to be an unlikely spot—an art museum. A \$700,000 addition to the Art Center in La Jolla, Calif., has an outer shell of block and reinforced concrete construction. The block, exposed both on interior and exterior, has a plain coat of paint.

The exposed block, say architects Robert Mosher and Roy Drew, gives a design that's economical and functional, with a look of extreme integrity.

The block was supplied by Hazard Products, Inc., of San Diego.

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Classified advertising copy may be ordered only in even column inch multiples, minimum one column inch, at the rate of \$10.00 per column inch. Closing date for classified advertising copy is the 4th of the month preceding. All orders and copy should be sent to Concrete Publishing Corporation, 400 West Madison St., Chicago 6, Illinois.

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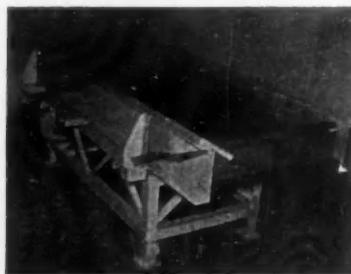
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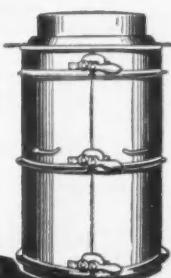




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NEW from STEARNS

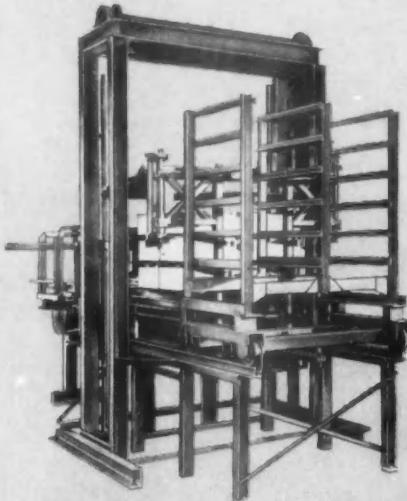
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- 4 Empty pallets return to block machine.



Another view showing rack load and unload station.

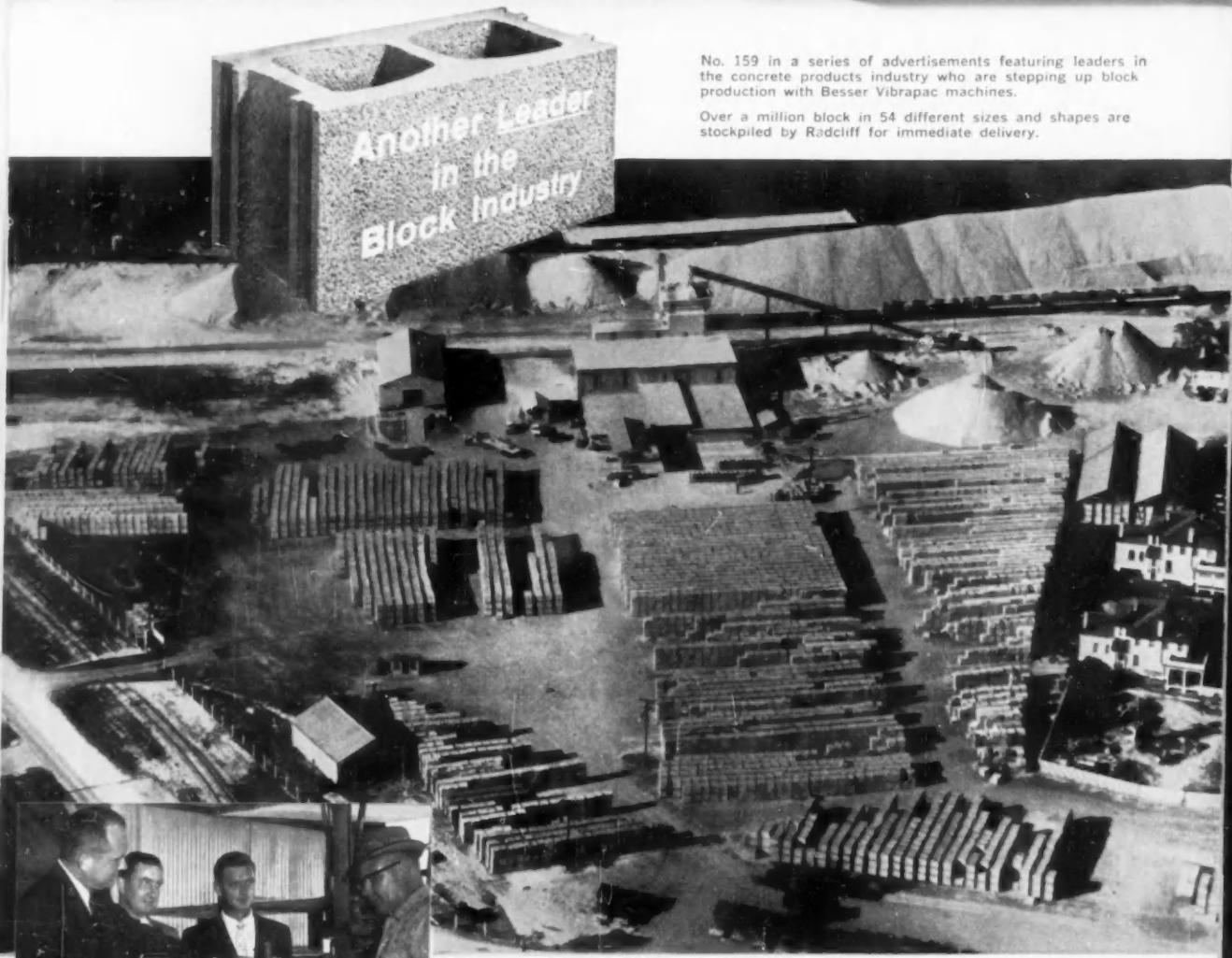


Stearns again offers another example of "advanced design" for automated block plant equipment . . .
THE AUTOMATIC RACK STRIPPER. This electrically and hydraulically driven block handling machine separates cured block from racks and pallets with a definite savings in operating and labor time. Write today for full particulars.

HOLIDAY GREETINGS FROM **STEARNS**
MANUFACTURING COMPANY - INC.
ADRIAN • MICHIGAN • U.S.A.

SEE US 12TH CONCRETE INDUSTRIES
EXPOSITION—JAN. 30TH - FEB. 2ND

COMPLETE CONCRETE PRODUCTS PLANT EQUIPMENT



No. 159 in a series of advertisements featuring leaders in the concrete products industry who are stepping up block production with Besser Vibrapac machines.

Over a million block in 54 different sizes and shapes are stockpiled by Radcliff for immediate delivery.



Above: R. H. Radcliff, Jr., president of Radcliff Materials, Inc., checking the accuracy of the 50-millionth Radstone unit produced by the company. Watching (from l. to r.) are E. B. Trice, vice president and general manager; Cecil Stallings, sales manager; W. Cochran, plant supt.

Below: Automatic batching insures that exact proportions are delivered to this Besser 50-cu. ft. Batch Mixer.



Talk about sustained profitable production...

Vibrapac-equipped plant produces 50-millionth block!

They're working on their next 50,000,000 block at Radcliff Materials, Inc., McDuffie Island, Mobile, Alabama. The company produces about 4,500,000 8"-equivalents a year, including Radstone and Mojave Stone units — for commercial, school, residential, and government work.

Radcliff installed its first Vibrapac in 1950 and a second in 1959. E. B. Trice, vice president and general manager, says, "We originally bought a Besser machine because we know that Besser is the leader in its field. Our experience with Besser equipment and service was such that when we purchased our second machine we never considered any other make."

It's the same story with many successful blockmakers throughout America — and the whole world. They *know* they can bank on Besser for the best in equipment.

Does *your* present concrete block machine deliver the output you need to make money in the block business? If not, you ought to switch to Vibrapac. See your Besser representative.



BESSER Company
Dept. 127, Alpena, Michigan, U. S. A.

First in Concrete Block Machines

